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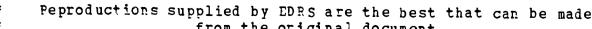
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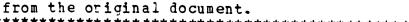
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ABSTPACT

This report summarizes all Year 11 National Assessment of Educational Progress activities performed under Westinghouse DataScore Systems contracts. The general time frame for DataScore's contract activities runs from March 1979 through October 1980 (with the exception of the Year 10 Art Scoring activities which were projected for February 1981 completion). Covering the preparation and printing specification aspects along with package irserts and distribution, this report also outlines suggestions for receipt control, handscoring and processing of tests. The maintenance and storage of scored tests are dealt with and, in closing, concerns and constructive criticisms are offered for project management. Primary type of information provided by report: Procedures (Packaging) (Scoring). (Author/CE)







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PRINTING AND SCORING ACTIVITIES

WESTINGHOUSE DATASCORE SYSTEMS

YEAR 11 FINAL REPORT

PREPARED FOR

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

No. 11-PS-47

REVISED

MARCH 1981



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Appendix A: Receiving Specifications



I. INTRODUCTION

This report summarizes all Year 11 National Assessment of Educational Progress activities performed under contract Nos. 02-79-16141 and 02-80-18218 by Westinghouse DataScore Systems. The general time frame for DataScore's contract activities runs from March 1979 through October 1980 (with the exception of the Year 10 Art Scoring activities which are projected for February 1981 completion).

II. PREPARATION AND PRINTING

Figure 1 summarizes preparation and printing specifications for Ages 9, 13, 17, and 17 Out-of-School documents. (Note that Age 17 packages and supplements were printed in sufficient overage to supply the Out-of-School Administration.)

In addition to those documents listed in Figure 1, nine (9) inserts were typeset and/or printed for inclusion with certain packages (indicated by "I" after package number on the figure). A summary of these inserts can be found in Figure 2.

General procedures followed for the preparation and printing process are outlined below:

- NAEP printing coordinator sent two (2) copies of the finalized and approved document mock-up to the DataScore coordinator.
- After DataScore coordinator's approval of package proof, proof sent to NAEP and copy to RTI.
- Corrections from NAEP were phoned to DataScore coordinator, followed by memo.
- 4. Final corrected page proofs were provided to NAEP.
- 5. DataScore internal document control approval was obtained.
- 6. Written authorization to print was received from NAEP.
- 7. Document was scheduled for printing at DataScore.
- 8. Upon age class completion, one "camera-ready" package proof of each package was produced for NAEP files.

A suggestion for improvement of preparation procedures from the NAEP printing coordinator involves irregular production and shipment of proofs from DataScore. Every effort should be made to: 1) produce proofs with an "even" effort from the darkroom to avoid "mass mailings"; 2) mail proofs to NAEP as available instead of holding for additional proofs; and 3) phone NAEP printing coordinator when shipments are made.

Age 13 preparation hours were underprojected due to delivery of non-finalized mock-ups to DataScore for typesetting. This problem resolved itself in subsequent age classes.

Printing of age class documents was targeted for completion one month prior to age class distribution to ensure adequate packaging time allowances. Covers were continuous form, package covers identical within age classes. Computer-slugged information included package number and consecutive identification numbers. Ink colors were



determined by NAEP. FEDAC clearance numbers for all documents except the supplements were provided prior to document preparation.

Age 17 supplement p eparation and printing encountered problems due to the tight schedule, all supplements being prepared and printed within a two-week time frame. Overtime was required to complete printing on schedule. FEDAC clearance numbers were stamped on the documents after shipmment to RTI.



FIGURE 1

YEAR 11 PRINTING SPECIFICATIONS

	PACKAGES					SUPPLEMENTS		
Age	Package #	# Pages	Ink Color	Туре	Print Quantity	#	# Pages	Ink Color
9	1	36	Blue	Change	4000	-	-	-
	2	32	Blue	Change	4000	-	-	-
	3	32	Blue	Change	4000	-	-	-
	4 (1)	28	Grey	New	4000	-	-	- ,
	5	28	Grey	New	4000	-	-	
	6 (I)	32	Grey	New	4000	-	-	-
	7	32	Grey	New	4000	-	-	-
	8	32-	Crey	New	4000	-	-	-
	9 (I)	24	Grey	New	4000	-	-	-
	10	32	Grey	New	4000	-	-	-
	11 (I)	36	Grey	New	4000	-	44-	_
13	1	40	Blue	Change	4000	-	-	-
	2	36	Blue	Change	4000	-	-	_
	3	36	Blue	Change	4000	-	-	_
	4 (I)	32	Grey	New	4000	-	-	_ !
	5	32	Grey	New	4000		-	_
	6	36	Grey	New	4000	-	-	_
	· 7	32	Grey	New	4000	-	-	_
	8	32	Grey	New	4000,	-	-	_
	9	28	Grey	New	4000	_	-	-
	10	24	Grey	New	4000	_	-	_
	11 (I)	28	Grey	l!ew	4000	_	-	-

		P A	CKAGE	S		_ s t	JPPLEM	ENTS
Age	Package #	# Pages	Ink Color	Туре	Print Quantity	#	# Pages	Ink Color
13	12 (I)	40	Grey	New	4000	-	` _	-
	13 (I)	28	. Grey	New	4000	-	-	-
	14	28	Grey	New	4000	-	-	_
	15	32	Grey	New	4000	-	-	-
9 & 13	P.Q.	8	Green	New	1500	- ,	-	-
17	1	40	Blue	Change	4400	1	4	Red
	2	40	Blue	Change	4400	2	4	Red
	3	40	Blue	Change	4400	3	4	Red
	4 (1)	32	Grey	New	4400	4	4	Red
	5	28	Grey	New	. 4400	5	4	Red
	6	32	Grey	New	4400	6	4	Red
	7	32	Grey	New	4400	7	4	Red
	8	28	Grey	New	4400	8	4	Red
	9	28	Grey	New	4400	9	4	Red
	10 .	28	Grey	New	4400	10	4	Red
	11 (I)	28	Grey	New	4400	11	4	Red
	12 (I)	36	Grey	New	4400	12	4	Red
	13 (1)	32	Grey	New	4400	13	4	Red
	14	32	Grey	New	4400	14	4	Red
	P.Q.	12	Grey	New	1500	-	-	-
1700S	same pa	ckages an	d suppleme	ents 1-14	In-School			
	B.Q.	12	Green	New	1000	-	-	-

B.Q. = Background Questionnaire 1700S = Age 17 Out-of-School Assessment



⁽I) = Insert Required
P.Q. = Principal's Questionnaire

FIGURE 2
YEAR 11 PACKAGE INSERTS

Age	Package #	Item #	Description	# Pages
A11	4	7	Dictionary page (plot-plunge)	1
13 & 17	7 11	7	Table of Contents	4
13	12	5	Bridges	4
13 & 1	7 12	8	Index (Conquistadores-Education)	1
13 & 1	7 13	5	Dictionary page (H-haet)	1
9	6	10	Index (oil-yurts)	1
9	9	8	Table of Contents (The Earth)	1
9	11	11	Dictionary page (Toledo-tonsorial)	1
17	12	5	The Galapagos Islands	4

III. PACKAGING AND DISTRIBUTION

Package inserts were inserted into packages in appropriate locations per NAEP instructions. Shipping memos were prepared for each shipment per RTI specifications, documents were packaged, and each shipment was quality controlled for accuracy. Documents were packaged in standard hardshells with appropriate quantities of empty hardshells forwarded for document return. Distribution schedules were provided by RTI. Documents for each age class were bulk-shipped to District Supervisors per address and shipping specifications received from RTI.

IV. RECEIPT CONTROL

The Year 11 receiving process was conducted by handscoring personnel during the following time frames:

AGE	FROM	<u>T0</u>
13	10/22/79	1/28/80
9 17	01/18/86	3/24/80
17	03/17/80	6/06/80

The opening and checking procedures are demonstrated in the receiving specifications included as Appendix A of this report.

The following table shows the n-counts for each age group:

ACE	TOTAL RECEIVED	NONELIGIBLES	TOTAL PROCESSED
13	41,684	110	41,574
17	29,185 36,186	82 55	29,103 36,131
			20,131

The average opening rate was 3.2 hours per hardshell. For Ages 13 and 9, all receiving was completed before scoring started. In Age 17, however, receiving was only 60% completed when scoring began because of material still arriving.

The final step of Receiving is logging. Before being scanned, a batch consists of 36 stacks with an approximate n-count of 4,500. Only one package number is included in a batch except for the combining of late arrivals. Each stack has a batch/stack header identifying the program, batch, stack and special service numbers. A logging record is initiated for location reference and includes the batch number, stack number, PSU/school number and number of packages in a PSU.

Problems encountered during the Year 11 receiving process include:

- ID/PSU/School numbers incorrect or not gridded on supplements.
- 2. Incorrect supplements given during administration.
- Regular/follow ups not gridded or gridded incorrectly on packages.
- 4. Regulars and follow ups not separated on worksheets.
- Background questions on packages not completed.



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- 6. P.Q.'s for schools with "800" numbers (split sessions) recopied on separate P.Q.
- G.A.S.'s with incorrect information such as PSU/School and I.D. numbers.

Suggestions for Year 13 include:

- Eliminate the hardshell cover sheet since the information it contains is present on the school worksheet.
- Devise a method of letting DataScore know when a shipment is complete.

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V. HANDSCORING

Year 11 handscoring was fairly smooth with delays in starting due to completion of receiving. Staffing was more stable than in Year 10 with approximately nine scorers, all having Bachelor's Degrees. The subject area of reading and literature includes several types of scoring: character inference, mood inference, emotional, evaluating, analytical, qualities, and general response. Each type of scoring has a separate guide. The staff was not separated into scoring groups because packages were not arranged by like scoring types.

There were a total of 21 items of which 14 were age crossovers and seven were unique to an age class. A list of items and scoring methods can be found in Figure 3.

The following are dates in which the various stages of scoring occurred.

	Age 13		Age 9		Age 17	
	From	To	From	<u>To</u>	From	<u>To</u>
Guide Refinement Training Scoring	1/4 1/16 1/28	1/24 1/25 3/26	3/18 3/18 3/31	3/19 3/19 4/1	4/14 4/14 5/16	4/18 4/18 7/11

Guide refinement and training was conducted by NAEP analysts. The preliminary guides were developed by the analysts and the reading and literature consultants. Items and guides were presented to DataScore's senior handscoring staff. Problems were discussed and guides finalized. A training packet containing item statement, scoring guide with examples, and a set of unscored training papers were given to the scorers.

Scoring was done by package followed by another package that had the same scoring types. Most items were scored once with a 10% sample second scored as a quality control. Because one table leader was involved with processing full time, it was difficult for the other table leader to keep pace with quality control and get results back to the scorers. Also, scoring was interrupted to a small degree by rescore preparation.

Year 02 was rescored for a replication study. NAEP provided a tape and list of ID's to be scored. Stacks were retrieved from the mezzanine, ID's located and checked against the list. Scoring was done on punched cards produced from the tape. The rescore papers were intermixed with Year 11 papers for scoring. Open-ended clerical items received a 10 percent rescore and a 100 percent rescore was done on open-ended literature items.

One large concern is the printing of packages months before scoring occurs. Some guide changes require the use of imaginary gridding ovals. A scorer must estimate where the oval would exist and grid accordingly. If the grid is not on center, the scanner does not

pick up the data and editing must enter the information which can be very time consuming. If preliminary scoring categories and/or guides are not drafted at the time the materials are printed, it might be advisable to include some additional ovals. Although excessive ovals may slow the processing in scoring and editing, the full impact is not as great as having to work with imaginary ovals.

YEAR 11 HANDSCORED ITEMS

H-465000-B1B-1, 2, 3	NAEP NUMBER	TITLE	AGES	SCORING
4-202002-22B-1 As The Cat 9 INF H-842000-B1B-1, 2, 3 Good Poem 9, 13, 17 QUA H-841000-B1B-1, 2, 3 Good Story 9, 13, 17 QUA H-443000-B1B-2, 3 Travels with Charley 13, 17 MOO 4-202024-22B-2, 3 Rodeo 13, 17 MOO H-402000-B1B-2, 3 Somebody's Son 13, 17 EVA H-467000-B1B-2, 3 Mother To Son 13, 17 EVA H-401000-B1B-2, 3 Somebody's Son 13, 17 CHA 4-200005-22B-2 Check 13 G.F H-464000-B1B-2, 3 The Door 13, 17 G.F H-464000-B1B-2, 3 The Old Tomato Man 13, 17 CHA H-406000-B1B-2, 3 Good Dog 13, 17 EM H-462000-B1B-2, 3 Letter To Nancy 13, 17 G.F H-469000-B1B-3 Lines For Winter 17 EVA H-470000-B1B-3 Lines For Winter 17 EVA H-420000-B1B-3 Lines For Winter 17 EVA H-420000-B1B-3 Cone Of These Days 17 EVA	H-405000-B1B-1, 2, 3	Nuts!	9, 13, 17	EVAL
H-842000-B1B-1, 2, 3 Good Poem 9, 13, 17 QUA H-841000-B1B-1, 2, 3 Good Story 9, 13, 17 QUA H-443000-B1B-2, 3 Travels with Charley 13, 17 MOO H-402000-B1B-2, 3 Rodeo 13, 17 MOO H-407000-B1B-2, 3 Somebody's Son 13, 17 EVA H-467000-B1B-2, 3 Somebody's Son 13, 17 CHA H-401000-B1B-2, 3 Somebody's Son 13, 17 CHA H-401000-B1B-2, 3 Somebody's Son 13, 17 CHA H-464000-B1B-2, 3 The Door 13, 17 G.I H-464000-B1B-2, 3 The Old Tomato Man 13, 17 CHA H-406000-B1B-2, 3 Good Dog 13, 17 EM H-462000-B1B-2, 3 Letter To Nancy 13, 17 G.I H-469000-B1B-3 Lines For Winter 17 EVA H-470000-B1B-3 Lines For Winter 17 EVA H-420000-B1B-3 Cone Of These Days 17 EVA	H-465000-B1B-1, 2	Old Dog	9, 13	EMOT
H-841000-B1B-1, 2, 3 Good Story 9, 13, 17 QUA H-443000-B1B-2, 3 Travels with Charley 13, 17 M00 H-402000-B1B-2, 3 Rodeo 13, 17 M00 H-407000-B1B-2, 3 Somebody's Son 13, 17 EVA H-401000-B1B-2, 3 Somebody's Son 13, 17 CHA H-401000-B1B-2, 3 Somebody's Son 13, 17 CHA H-404000-B1B-2, 3 The Door 13, 17 CHA H-441000-B1B-2, 3 The Door 13, 17 CHA H-441000-B1B-2, 3 The Old Tomato Man 13, 17 CHA H-406000-B1B-2, 3 Good Dog 13, 17 CHA H-406000-B1B-2, 3 Letter To Nancy 13, 17 CHA H-413000-B1B-2, 3 Cow-Tail Switch 13, 17 EVA H-469000-B1B-3 i was you 17 AN H-470000-B1B-3 Lines For Winter 17 EVA H-420000-B1B-3 One Of These Days 17 EVA	4-202002-22B-1	As The Cat	9	INF
H-443000-B1B-2, 3 Travels with Charley 13, 17 M00 4-202024-22B-2, 3 Rodeo 13, 17 M00 H-402000-B1B-2, 3 Somebody's Son 13, 17 G.R H-467000-B1B-2, 3 Mother To Son 13, 17 CHA 4-200005-22B-2 Check 13 G.R H-464000-B1B-2, 3 The Door 13, 17 G.R H-441000-B1B-2, 3 The Old Tomato Man 13, 17 CHA H-406000-B1B-2, 3 Good Dog 13, 17 CHA H-462000-B1B-2, 3 Letter To Nancy 13, 17 G.R H-469000-B1B-2, 3 Cow-Tail Switch 13, 17 EV. H-469000-B1B-3 i was you 17 AN H-470000-B1B-3 Lines For Winter 17 EV. H-420000-B1B-3 One Of These Days 17 EV.	H-842000-B1B-1, 2, 3	Good Poem	9, 13, 17	QUAL
H-443000-B1B-2, 3 Rodeo 13, 17 M000 H-402000-B1B-2, 3 Somebody's Son 13, 17 EVA H-467000-B1B-2, 3 Mother To Son 13, 17 EVA H-401000-B1B-2, 3 Somebody's Son 13, 17 CHA 4-200005-22B-2 Check 13 G.F. H-464000-B1B-2, 3 The Door 13, 17 G.F. H-441000-B1B-2, 3 The Old Tomato Man 13, 17 CHA H-406000-B1B-2, 3 Good Dog 13, 17 EMC H-462000-B1B-2, 3 Letter To Nancy 13, 17 G.F. H-413000-B1B-2, 3 Cow-Tail Switch 13, 17 EVA H-469000-B1B-3 i was you 17 AN H-470000-B1B-3 Lines For Winter 17 EVA H-420000-B1B-3 One Of These Days 17 EVA	H-841000-B1B-1, 2, 3	Good Story	9, 13, 17	QUAL
H-402000-B1B-2, 3 Somebody's Son 13, 17 G.R H-467000-B1B-2, 3 Mother To Son 13, 17 EVA H-401000-B1B-2, 3 Somebody's Son 13, 17 CHA 4-200005-22B-2 Check 13 G.R H-464000-B1B-2, 3 The Door 13, 17 G.R H-441000-B1B-2, 3 The Old Tomato Man 13, 17 CHA H-406000-B1B-2, 3 Good Dog 13, 17 EMC H-462000-B1B-2, 3 Letter To Nancy 13, 17 G.R H-413000-B1B-2, 3 Cow-Tail Switch 13, 17 EV H-469000-B1B-3 i was you 17 AN H-470000-B1B-3 Lines For Winter 17 EV H-420000-B1B-3 One Of These Days 17 EV	H-443000-B1B-2, 3	Travels with Charley	13, 17	MOOD
H-467000-B1B-2, 3 Mother To Son 13, 17 EVA H-401000-B1B-2, 3 Somebody's Son 13, 17 CHA 4-200005-22B-2 Check 13 G.F H-464000-B1B-2, 3 The Door 13, 17 G.F H-441000-B1B-2, 3 The Old Tomato Man 13, 17 CHA H-406000-B1B-2, 3 Good Dog 13, 17 EMO H-462000-B1B-2, 3 Letter To Nancy 13, 17 G.F H-413000-B1B-2, 3 Cow-Tail Switch 13, 17 EVA H-469000-B1B-3 i was you 17 AN H-470000-B1B-3 Lines For Winter 17 EV H-420000-B1B-3 One Of These Days 17 EV	4-202024-22B-2, 3	Rodeo	13, 17	MOOD
H-401000-B1B-2, 3 Somebody's Son 13, 17 CHA 4-200005-22B-2 Check 13 G.B H-464000-B1B-2, 3 The Door 13, 17 G.B H-441000-B1B-2, 3 The Old Tomato Man 13, 17 CHA H-406000-B1B-2, 3 Good Dog 13, 17 EMC H-462000-B1B-2, 3 Letter To Nancy 13, 17 G.B H-413000-B1B-2, 3 Cow-Tail Switch 13, 17 EV. H-469000-B1B-3 i was you 17 AN. H-470000-B1B-3 Lines For Winter 17 EV. H-420000-B1B-3 One Of These Days 17 EV.	H-402000-B1B-2, 3	Somebody's Son	13, 17	G.R.
H-401000-B1B-2, 3 Somebody's bon 4-200005-22B-2 Check	H-467000-B1B-2, 3	Mother To Son	13, 17	EVAL
H-464000-B1B-2, 3 The Door 13, 17 G.B H-441000-B1B-2, 3 The Old Tomato Man 13, 17 CHA H-406000-B1B-2, 3 Good Dog 13, 17 EMC H-462000-B1B-2, 3 Letter To Nancy 13, 17 G.B H-413000-B1B-2, 3 Cow-Tail Switch 13, 17 EV. H-469000-B1B-3 i was you 17 AN. H-470000-B1B-3 Lines For Winter 17 EV. H-420000-B1B-3 One Of These Days 17 EV.	H-401000-B1B-2, 3	Somebody's Son	13, 17	CHAR
H-441000-B1B-2, 3 The Old Tomato Man 13, 17 CHA H-406000-B1B-2, 3 Good Dog 13, 17 EMC H-462000-B1B-2, 3 Letter To Nancy 13, 17 G.1 H-413000-B1B-2, 3 Cow-Tail Switch 13, 17 EV. H-469000-B1B-3 i was you 17 AN. H-470000-B1B-3 Lines For Winter 17 EV. H-420000-B1B-3 One Of These Days 17 EV.	4-200005-22B-2	Check	13	G.R.
H-406000-B1B-2, 3 Good Dog 13, 17 EMC H-462000-B1B-2, 3 Letter To Nancy 13, 17 G.1 H-413000-B1B-2, 3 Cow-Tail Switch 13, 17 EV. H-469000-B1B-3 i was you 17 AN. H-470000-B1B-3 Lines For Winter 17 EV. H-420000-B1B-3 One Of These Days 17 EV.	H-464000-B1B-2, 3	The Door	13, 17	G.R.
H-462000-B1B-2, 3 Letter To Nancy 13, 17 G.1 H-413000-B1B-2, 3 Cow-Tail Switch 13, 17 EV. H-469000-B1B-3 i was you 17 AN. H-470000-B1B-3 Lines For Winter 17 EV. H-420000-B1B-3 One Of These Days 17	H-441000-B1B-2, 3	The Old Tomato Man	13, 17	CHAR
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H-470000-B1B-3 i was you 17 AN. H-470000-B1B-3 Lines For Winter 17 EV H-420000-B1B-3 One Of These Days 17 EV	н-462000-в1в-2, 3	Letter To Nancy	13, 17	G.R.
H-470000-B1B-3 Lines For Winter 17 EV H-420000-B1B-3 One Of These Days 17 EV	H-413000-B1B-2, 3	Cow-Tail Switch	13, 17	EVAĹ
H-470000-B1B-3 One Of These Days 17 EV	H-469000-B1B-3	i was you	17	ANAL
H-420000-BIB-3 One of These says	H-470000-B1B-3	Lines For Winter	17	EVAL
H-421000-B1B-3 The Kite-Maker 17 AN	H-420000-B1B-3	One Of These Days	17	EVAL
	H-421000-B1B-3	The Kite-Maker	17	ANAL
4-200008-22B-3 Into My Heart 17 G.	4-200008-22B-3	Into My Heart	17	G.R.

INF = Inference

CHAR = Character Inference

MOOD = Mood Inference

EMOT = Emotional

EVAL = Evaluating

ANAL = Analytic 1

QUAL = Qualitie

G.R. = General Responding



VI. PROCESSING

Year 11 processing was also an improvement over Year 10. The shunting of handscored items proves to be beneficial for everyone except programming, as it adds one more scan and edit program to the project. Shunting during the first pass does allow for faster processing of multiple choice questions and therefore production of the n-count tape for RTI which is used to compute weights. RTI sends a weight tape to DataScore for use in the reformat program.

Two procedures were improved and should be continued.

1. Modify condition code logs. The old method consisted of verifying each ECC record in editing. A "2" error in the previous edit specifications indicated a non ECC which had to be verified and then passed through the post-edit by submitting two (K&T) correction cards containing pound signs. This was a difficult task for editing and caused numerous correction card entries.

Receiving still keeps ongoing lists of all partial administrations in the new system. Listings (sorted by package) are produced after the pre-edit and each post-edit. The batch, stack, serial number, and the entire response are printed. The receiving log is verified with the printout and discrepancies are resolved with correction cards.

2. Inclusion of data on reformat tape from GAS (Group Assignment Summary). A clerk transcribes the data from the top portion of the GAS and key enters the data. A utility program is used to create a file. The reformat program accesses the file, verifies the key, and merges the data onto the K-type 13 reformat record. The one problem with this procedure concerns the DS not designating a regular (R) or follow-up (F) administration.

Handscoring personnel continued to be involved with processing and coordination. DataScore received specifications from NAEP for pages to be shunted, tape positions, forcings and consistency checks, and response ranges for first and second passes. All materials are reviewed by handscoring to insure any changes in scoring categories that affect tape positions and response ranges. After the review, scoring keys and response range keys are coded and delivered to the team leader in Programming. The scanning and first machine pass edit programs are written, tested with a NAEP and DataScore test batch, and checked by DataScore's Quality Control Department. Once the programs have been approved by the Quality Control Department, NAEP conducts their own Quality Control and gives authorization to process.

The first pass of machine processing involves scoring all multiple choice items and shunting of handscored items. Batches are arranged by package for easier reference and to keep the same open-ended items together. Editing resolves all errors, checks the condition code



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list against the condition code log from receiving, and the batch is submitted for a post-edit. If the post-edit is not clean, further corrections are made and condition code lists and logs are checked again for possible updates. Once all post-edit batches are clean, the tapes are saved for the merge program and an n-count tape is produced and sent to RTI for weight calculation.

Second pass machine processing contains a second scanning and edit program for handscored items only. Again, batches are arranged by package. The same process of scanning and editing (second pass editing is done in handscoring) as first pass is conducted omitting the condition code check and n-count tape.

The reformat program merges first and second pass batches, RTI's weight tape, and the GAS file mentioned earlier. A reconciliation of batches is completed and additional comments may be made to the condition code listing before a final tape is produced and sent to NAEP.

Rescore processing involves the revision of specifications of tape positions, response ranges, and forcings and consistency checks for items scored in previous years. These are delivered to the programming team leader along with a tape supplied by NAEP. The tape contains information such as ID numbers and PSU/schools to be rescored. From the tape, cards for each ID are punched and delivered to handscoring on which to do the scoring. Scan and edit programs are written, tested, and checked by Quality Control. After the pre-edit and editing, clean post-edits are merged with the NAEP tape. All missing ID's are resolved and the final tape is sent to NAEP.

Two concerns should be mentioned at this time:

- 1. The Varidoc tape procedure seems to demand a lot of labor hours. Alternative procedures should be investigated before 1982.
- 2. The edit program for the second machine pass (handscored items) appears to be holding up processing by a matter of a few weeks. Finalized tape positions, response ranges, and forcings and consistency checks are known only after scoring has started. Also, there seems to be some conflict with various stages of programming in overlapping ages. Shunting requires the extra program and we should allow adequate time for it to be done.

VII. OUT-OF-SCHOOL: GENERAL DISCUSSION

The OOS project ran very smoothly and created no conflicts with the in-school schedule as it occured immediately after. Printing consisted of the Student Background Questionnaire which was shipped to RTI for distribution on May 9. Because NAEP did not receive the OMB clearance number until May 12, it was decided that DataScore should print and have RTI enter the number on all BQs.

Receipt Control was conducted from June 9 through August 11 with a total of 658 student envelopes received of which 7 were determined to be non-eligibles. Each respondent was allowed to take up to 3 packages and the BQ. Envelopes were opened as they arrived and checked to provide RTI with immediate feedback of any errors or missing information. Weekly updates of respondents received and problem tallys were sent to RTI. The only delay experience was waiting for RTI to receive missing information on BQ tailsheets. Procedures for receipt control were identical to in-schools with the addition of checking package numbers and order of administration with the BQ.

Scoring took place July 9 through August 12 using the same staff as in-schools. The items and guides were identical to 17 in-schools eliminating guide refinement, training, or guide review. Most of the responses were quite short so that scoring didn't take as long as expected. Only one computer pass was made but handscored items were shunted and stored with 17 in-school items. Pre and post edits were QCed August 19 and 20 and the final reformat tape was mailed October 16.

VIII. ART SCORING PROJECT

All materials were retrieved from the mezzanine prior to scoring and arranged in ID order according to Age Class, Package and Year. A check of IDs against list supplied by NAEP was made to determine missing IDs and extra packages (which were most often birthdates out of range) that had not been taken out of the stacks.

Guide refinement took place from September 15 through September 25 and included a NAEP analyst, art consultant, and handscoring coordinators and manager. The refinement took an additional five days over the forecast (totaling almost two days per guide) which delayed training and scoring. In retrospect, it would have been valuable to have the art consultant spend more time with the NAEP analyst prior to refinement. Also, an objective statement and detailed scoring rationale for each item would have been helpful throughout the project.

Training occurred September 25 through October 3 and was led by the NAEP analyst and the art consultant. The same materials that were used in refinement were used for training and consisted of a scoring guide with examples and sample papers to score. One item took 1-1/3 days of training on the average.

DataScore's art consultant had a degree in art with teaching experience. She also doubled as a table leader for both teams and was responsible for making and relaying scoring decisions and conducting quality control. All scorers had a Bachelor's Degree. Following is a list of items and averages per team.

Team 1 (4 scorers)

1-101005-62A-1,2,3

Two Flowers

1-301008-62A-1,2,3

Necklace

1-202042-62A-2,3

Big B

Team 1 averaged 12.3 packages per hour or about 2 minutes per item.

Team 2 (4 scorers)

1-302006-62A-1,2,3

Six Sketches

1-501012-62A-1,2,3

Picasso Horses

1-304014-62A-2,3

Angry Person

Team 2 averaged 8.5 packages per hour or about 2.6 minutes per item. Each team scored approximately 40,000 items.

Scoring started September 26 with Team 1 finishing December 19 and Team 2 finishing on January 15, 1981. Scorers constantly changed year and age packages to maintain uniform application of scoring

across ages and years. It took scorers a full month to reach the peak production rate. The subjectivity of some of the scoring catagories helped cause the slow start and rates didn't increase as expected. This was a cause of scorer frustration. A particular problem for Team 1 was scoring the cohesive and vivid categories on "Big B." This was resolved by having only two scorers score these categories, which increased the team's scoring rate and consistency. Team 2 was slower because of the amount of gridding required for "Six Sketches."

Quality control was conducted over 7 weeks and included all age groups in both years. Team 1 showed an overall agreement rate of 95% and Team 2 had a 92.8% result. Following is the percentage of agreement by exercise:

Team 1

<u>Exercise</u>	% Agreement
Two Flowers	95.2
Necklace	94.0
Big B	95.3

Team 2

Exercise	% Agreement
Six Sketches	95.0
Two Horses	89.0
Angry Person	94.5

IX. MINTENANCE AND STORAGE

All Year 11 NAEP materials were added to NAEP inventory in mezzanine of DataScore warehouse. Materials will be added to computerized inventory early in 1981.

DataScore's warehouse storage space was increased from 1,260 square feet to over 2,000 square feet to accommodate the crowded storage situation. Additional steel shelving was installed for package-stack storage.

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X. PROJECT MANAGEMENT

DataScore organizational changes included:

- April 1980: Acting Handscoring Manager took position at another division processing site. New DataScore Project Manager and Handscoring Manager announcements were presented.
- August 1980: One Handscoring Coordinator left project to resume graduate studies. An art consultant was retained to assume coordinative, as well as consultant responsibilities for upcoming art scoring project.
- December 1980: Acting Project Manager assumed position in another department. A new Project Manager, with extensive NAEP background, was named as a replacement, project transition to occur in January 1981.

NAEP Management Meetings were attended by DataScore personnel in December of 1979 (Raleigh), January (Raleigh), March (Raleigh), and June 1980 (Iowa City).

An Out-of-School planning meeting was held in April 1980.

In June of 1980, DataScore personnel travelled to Denver to discuss ballpark costs for subsequent assessment year projected specifications.

In December of 1980, a Year 11 general debriefing and preliminary Year 13 planning meeting was held in Iowa City. Conferences and reporting tasks also included:

- . Quarterly Reports (1981)
- . Cost Projections
- . Schedule Revision3
- . Contract Administration (three modifications to Contract No. 02-79-1641; one modification to Contract No. 02-30-18218.)

Project management concerns expressed by NAEP:

- 1. Heavy involvement of Handscoring Manager in non-NAEP handscoring during first four months of 1980 caused problems in communication and subsequently impacted the schedule.
 - 2. The DoDDS-80 project had to be monitored closely to avoid NACP schedule interference.
 - 3. Contract modification to 1980 contract was not provided prior to task completion.



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APPENDIX A



NATIONAL ASSESSMENT

Receiving Specifications

TERMS

- PSU = Primary Sampling Unit = A PSU is a 2 digit number which identifies the geographical location of the sample.
- DS = District Supervisor = The country is divided into 13 parts. A district supervisor is assigned to each part.
- EA = Exercise Administrator = EA's are hired by a DS to administer the test.
- RTI = Research Triangle Institute = Located in Research Triangle Park, North
 Carolina (center of a triangle formed by
 the cities of Raleigh, Durham, and Chapel
 Hill). RTI is the NAEP subcontractor
 responsible for sampling and
 administration.

RECEIVING PROCEDURES

- 1) Hardshells for approximately 10 PSU's will be received by bus each week. These may be complete or partial PSU shipments.
- 2) When stock control delivers the hardshells they will notify the person in charge of NAEP Receiving.
- 3) The person in charge of NAEP Receiving will enter the date and number of hardshells received on the Receiving Checklist. (See Attachment 1.) This checklist must be ke t current.
- 4) DS's should have written the PSU number on the top of the hardshell. Enter this number on the checklist. If the PSU number is not written on the return card, open the hardshell to find the number and enter it on the card.
- 5) The hardshells received should be stacked by PSU and set aside for opening.

RTI INCOMING FORMS

- Group Administration Schedule Forms (yellow tear-offs)=
 Identifies grade, sex, birthdate, and race for each ID/package/school PSU.
 This is a yellow strip of paper or tear-off.
- Hardshell Cover Sheet =
 Inventory of the quantities of each package sent for a given hardshell.
 (See Attachment 2.)



Package Assignment Summary = .

Lists the schools included in each PSU. A range of packages are also listed for each school. (See Attachment 3.)

School Worksheet =
Inventories the packages and their quantities tested in the school.
Administration problems are written in the section at the bottom of the page. (See Attachment 4.)

DATASCORE OPENING FORMS

Problem Tally Sheet =
Describes certain errors committed by a DS in returning the hardshell. (See Attachement 5.)

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School Header =
 Identification Header for DataScore processing. (See Attachment 6.)

School Worksheet Tally = .

Inventories the number of each package for each school. (See Attachment 10.)

Condition Code Log =

Identifies and describes problems in administration. (See Attachment 11.)

OPENING PROCEDURES

- 1) Choose a PSU. Be sure to pull all the hardshells which are present for that PSU. Choose those PSU's in order of receipt.
- 2) Pull the Package Assignment Summary for the PSU. (See Attachment 3.)
- 3) Start Condition Code Logs one condition code log will be used for each package number. (See Attachment 11.)
- 4) Start a Problem Tally Sheet.
- 5) Open the first hardshell of the PSU. Refer to the chart for the contents and order of an unopened PSU (see Attachment 7). Each hardshell should contain a hardshell cover sheet. Take out the hardshell cover sheet and set it aside. If a cover sheet was not enclosed, enter an error on the Problem Tally Sheet. Fill out a cover sheet for the hardshell.
- 6) The next document in the hardshell should be a school worksheet. Read Section F to alert you to administration problems which you will encounter later in the hardshell. Check to make sure there is a "Final Group Size" listed on the worksheet.
 - A) A Principals' Questionnaire should be enclosed for each school. If the appropriate PQ is not enclosed, the DS should have written a note



explaining when it will be transmitted. (If no note is present, mark and error on the Problem Tally.)

- B) Make sure the PSU/School number is entered and gridded.
- C) File the PQ(s) in PSU/School order.
- D) If the PQ(s) will be coming later, insert a sheet of gold paper with the PSU/School number written on it. When the PQ comes in take out the gold esheet.
- 7) The Group Administration Schedules (GAS's) should follow the worksheet. In some cases the GAS's will be tucked inside the first package of each package set. Set them aside.
- 8) The package sets for that school should follow the GAS's. Each set of packages should already be turned in the hardshell.
- 9) Take out the first set of packages. The PSU and school numbers are written on the front of each package Section #8. The first two entries are the PSU. The last three entries are the school number. Be sure that you have the PSU and school to match the school worksheet you are working with. Make sure all the packages in one set are the same package number.
- 10) Count the packages in each package set and check off that distinct package number on the School Worksheet with a red pen. If the counts do not match, check the GAS for that package set. If the GAS agrees with your count, change the School Worksheet in red and enter an error on the Tally Sheet. If the GAS does not agree with your count, see the Receiving Coordinator.
- 11) Check the information from the GAS to the front of each package-Section 3-6.
 - A) Find the GAS for that package number.
 - B) Check to make sure the same PSU and school number is written on the GAS, school worksheet and EACH package.
 - C) Find the ID number on the GAS that corresponds with the ID or the package.
 - D) Check the data entered in Sections 3-6 on the cover of the package.
 - 1) Column 3 = Grade
 98 = Ungraded Class
 99 = Special Education
 - 2) Column 4 = Sex 1 = Male 2 = Female



3) Column 5 = Birthdate

13 year olds = 01-12, 1966.

Make sure the year is in range. If not, the student is not eliquible. (See Section 12d.)

4) Column 6 = Race

 $\overline{1}$ = White

2 = Black

3 = Spanish Heritage

4 = American Indian or Alaskan Native

5 = Asian or Pacific Islander

6 = Other

- E) If you find a discrepancy between the yellow GAS tear-offs and the cover entries, change the entry on the package. Enter an error on the Problem Tally.
- 12) Check to see that one oval is gridded in the Package Wide Condition Code (PCO). The PCO is located in the lower left corner of the cover page. The ovals are marked N (normal), P (partial), NR (no response), and NE (not eligible).
 - A) When the PCO is an N, this means that the administration was normal.
 - B) If the PCO is a P, there should be a note from the DS either on the package or worksheet explaining why the administration was partial and which items were not completed. If this note is only on the worksheet, transfer it to the front of the package and enter an error on the Problem Tally Sheet.
 - 1) Enter the ID and note the condition code log for that package.
 - If there is no note, consult the Receiving Coordinator to resolve the problem. If you must change the P to N, enter an error on the Tally Sheet.
 - C) If the PCO is an NR:
 - 1) All items must be no response.
 - 2) If any item has been responded to, check the eligibility of the student and change the NR to N or NE (see D below) and enter an error on the Tally Sheet.
 - D) If the PCO is an NE:
 - The DS should have written the problem on the front of the package.
 - 2) When no note is written, look for the problem.
 - a. Look at the birthdate on the GAS to see if it is out of range (OOR).
 - b. Consult the Receiving Coordinator for assistance in resolving the problem.



- c) If no note is written on the package or worksheet, mark an error on the Tally Sheet.
- d) Write a note on the front of the package (if no note is written) explaining why the package has been deleted.
- 3) Pull the package out of the assessment.
- 4) Make sure the PSU and school numbers written on the front of the package are correct.
- 5) Correct the package count on the school worksheet, unless the DS has already done so. The Hardshell Cover Sheet count should INCLUDE the deleted package.
- 6) On the school worksheet, make a note of the ID number, package number and the reason for deleting the package.
- 13) Background questions are on the tail sheet of each package. (See Attachment 8.)
 - A) A school may refuse to have the students answer these questions.
 - 1) The DS must write a memo or make a note on the school worksheet.
 - 2) If there is no note, check the list of school refusals which was sent by RTI.
 - 3) Notify the Receiving Coordinator of any refusals which are not on RTI's list.
 - B) If any or all of questions 1-9 (on the back page) are blank, code the IDK oval. If any or all of 5-9 are blank, enter an error on the Problem Tally sheet.
 - C) Question 9 asks in which states the student lived on his/her 9th birthday.
 - 1) If "In the U.S.", check the following.
 - a) See that the oval is gridded in the proper part. A state should be written in the proper blank.
 - b) Grid the state code in the column at the right. (See Attachment 8 and 9.)
 - c) If a territory is written, check the list of U.S. territories in Attachment 9.
 - If the territory is listed, grid "OT" in the column at the right.
 - If the territory is not listed as a recognized territory, check with the Receiving Coordinator.
 - d) If a city is written on the line:
 - See if that city has been listed in conjunction with a state name on other packages in that school. If so, code that



state. If not, look in an atlas to see if a city by that name exists in the state in which the school is located (found on Package Assignment Summary).

2) Enter an error on the Tally Sheet.

e) If the line is blank:

- 1) Grid the oval labeled BL (3rd from the bottom).
- 2) Enter an error on the Tally Sheet.
- 2) If "Outside the U·S·", check the following.a) See that the oval is gridded in the proper part.

- A country should be written on the line. If so, code "OC" in the column on the right.
- c) If the line is blank, code BL (at the bottom of the page) and enter an error on the Tally Sheet.
- 3) If IDK is gridded, do not code anything in the column on the right.
- 14) When you have finished a set of packages, complete a school header. There will be header for each package set. Enter the following information. (See Attachment 6.)
 - A) 2-digit PSU.
 - B) 3-digit school.
 - NCNT -- total number of packages (3 digits).
 - Number of packages -- enter only counts for that particular package set. D)
- 15) The packages are now ready for a preliminary handscoring phase. At this time, enter and grid all embedded ID's, handscore the clerical scoring items, condition code any affected items and check to make sure the inserts have been removed from the packages. A list of inserts and their locations follows.

Age Class II Inserts

Insert #	Insert Description	<u>Package</u>	<pre>Item #</pre>	Page #
1	Dictionary Page plot/plunge (1 P.)	4	7	14-15
2	Table of Contents (4 pp.)	11	7	16-17
3	Bridges (4 pp.)	12	5	8- 9
4	Index - Conquistadores/ Education (1 p.)	12	. 8	24-25
5	Dictionary Page H/haet (1 p.)	13	5	14-15

- 16) Place the package set in a cardboard box. Each package number is boxed separately. For example, there will be a box of package 1's, a box of package 2's, etc. One box will contain several PSU's. The PSU/School must be kept together under the school header. Turn each school in the box.
- 17) Repeat steps 1 to 16 for all package sets in the school.



- 18) At the completion of a school, be sure you have accounted for all the packages listed on the school worksheet.
- 19) Using the school worksheet, check off the school on the Package Assignment Summary. Also make sure that the packages assigned to that school have been tested. Notify the Receiving Coordinator if there are any discrepancies. If there were no packages to be administered in a school, write "NN" by the school number.
- 20) Again using the school worksheet, check off the number of packages returned against the quantitites listed on the hardshell cover sheet. Make your corrections in red and enter an error on the Problem Tally.
- 21) If there are any problems which can't be solved without calling RTI, fill out a Receiving Problem Sheet. Turn this in to the Receiving Coordinator with the other forms when you have completed the PSU.
- 22) Repeat steps 1 to 21 for each school in the PSU.
- 23) If the PSU is complete, check "complete" on the Problem Tally. If the PSU is not complete, check "partial" on the Problem Tally.
- 24) Xerox 2 copies of the Problem Tally Sheet. Xerox 1 copy of the School Worksheet if any changes have been made. Xerox 1 copy of the Hardshell Cover Sheet if any chagnes have been made.
- 25) At the completion of a PSU, paperclip the following together:
 - A) Package Assignment Summary
 - B) Hardshell Cover Sheets
 - C) School Worksheets
 - D) Problem Tally Sheet
 - E) Deleted Packages
 - F) Xeroxes

Turn the finished forms in to the Receiving Coordinator.

- 26) Separate the GAS's by package. File them by PSU/School.
- 27) The keypunch form, "National Assessment School Worksheets," will be filled out by the Receiving Coordinator. (See Attachment 10)

gmc Attachments



Yr	

RECEIVING CHECKLIST

PSU	Date # of pieces	RTI notif.	# of $\frac{\text{Date}}{\text{pieces}}$	RTI notif.	Date # of pieces	RTI notif.	Completed Shipment
						<u> </u>	
				-			
		-					
		+					
		+					
						+	
	4						
		+					
			1			1	

Receivers should initial (in red) a shipment after it is opened.



ATTACHMENTS 3 and 4
OMMITTED DUE TO CONFIDENTIALITY

DS			

PSU '

Packages

School Nos	1	2_	3_	4	5	6	7_	8	9	10	11	12	13	14	15
												,			
,]									
	-				-					_	-				
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TOTALS		Ц	L		<u> </u>	L		L	Ч——		<u> </u>			.	لـــــــــــا

Directions:

- 1. Enclose a hardshell cover sheet in each hardshell (box) of the PSU.
- 2. Enter each school number included in the hardshell.
- 3. Enter the quantities of the packages assessed in each school.
- 4. Total the column for each package contained in the hardshell.

Disposition: White copy to MRC; yellow copy retained by DS.

07/30/79

/ac

ERIC

Full Text Provided by ERI

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34

YEAR 11 RECEIVING PROBLEM TALLY Age Class 2

Partial	
Complete	

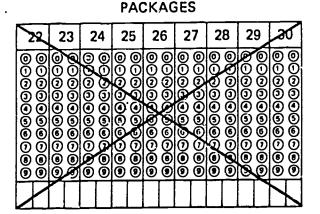
Dis	tri	ct Supervisor P.S.U	
			E. A. No.
1.	Wor	rksheet	
	a.	Package counts incorrect	
	ь.	Worksheet not returned	
	c.	Final group size missing	
	d.	Miscellaneous	
2.	C		
۲.		oplementary Principal's Questionnaire	
	a.	P.Q. not returned (without explanation)	
3.	Bac	ckground Questions (tailsheet)	
	a.	Questions 5-9 gridded when specifically not allowed by school	
	ь.	Questions 5-9 not answered and no explanation included	
	c.	Question 9 not answered	
	d.	Question 9 - in U.S entry is other than a state	
	e.	Miscellaneous	
4.	Pac	kage Condition Ovals (PCO)	
	a.	Not gridded or double gridded	
	b.	NR or NE gridded but no explanation on package or on school worksheet	
	c.	P gridded but no explanation-reason and affected exercise(s) noted on front of package	·
	d.	N gridded, but administration is partial	
	e.	BD is out of range, but PCO not coded as NE	
	f.	Miscellaneous35	
			·

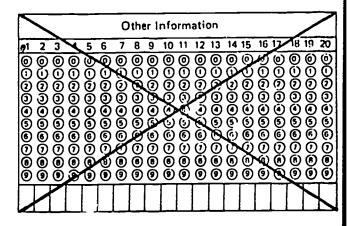
			}	·	
5.	Gr	oup Administration Schedule Forms (Tearoffs)	·		
	a.	Not returned			
	b.	Returned but incomplete or not legible			
		1. Grade			
		2. Sex			
		3. Birthdate			
		4. Race			
		5. PSU/School Number			
	с.	Entries transferred incorrectly to front of package			·
		1. Grade			
		2. Sex			
		3. Birthdate	-		
		4. Race			
		5. PSU/School Number			
	d.	ID written incorrectly on GAS			
	e.	Miscellaneous			
6.	Mis	cellaneous .	F		
	a.	Incorrect packages administered			
	b •	Hardshell incorrectly packed			
		 Schools are interspersed and not packed as cohesive units. 			
		 Within the school unit, package numbers are mixed together. For example, Package 1's and 2's are interspersed. 			
	с.	Cover sheet filled out incorrectly or not returned			
	d.	Other miscellaneous			



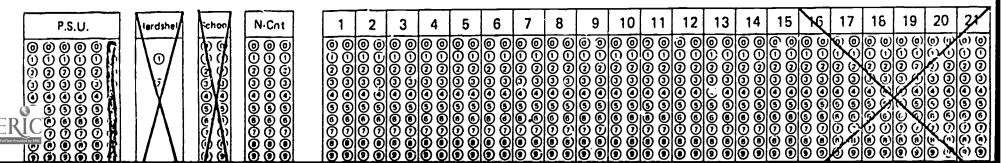
NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS School Header

Scorer I,D.							
1	2	\ 3	4	5_	6		
<u> </u>	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	<u>©©©©©©©©©©</u>	<u> </u>	<u> </u>	<u> </u>		
					N		



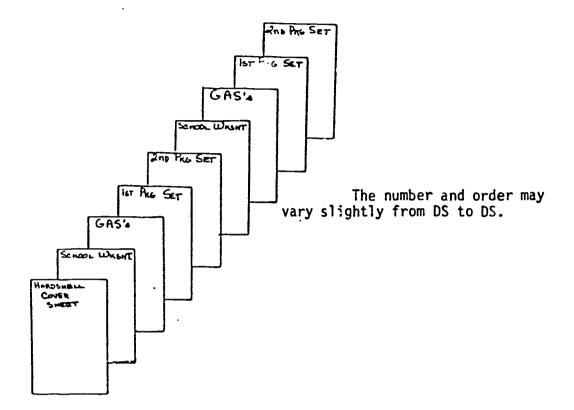


PACKAGES



4.	Boes your family get a newspaper regularity;	BELOW,
•	Yes No I don't know.	· AL C
_		AK ←
2.	Does your family get any magazines regularly?	AZ C
		AR C
	Yes No I don't know.	CA C
_		CO C
3.	Are there more than 25 books in your home?	CT C
		DE
	Yes No Idon't know.	FL C
4	To the course of the Prince of the Course of	GA C
4.	Is there an encyclopedia in your home?	HI C
	Con Ver Con No. of Library 1	ID C
	Yes No I don't know.	
r		IN C
5.	How much school did your father complete?	IA C
	(FILL IN THE ONE OVAL which best shows how much school your	KS \subset
	father completed.)	KY C
	Did not complete the 8th grade	LA C
	Completed the 8th grade, but did not go to high school	ME
	Went to high school, but did not graduate from high school	MDC
	Graduated from high school	MAC
	Some education after graduation from high school	MIC
	6-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	MN
	☐ I don't know.	MS _
6.	Did your father graduate from a college or university?	MOC
٠.	Did Jour lather graduate from a conege of university:	MT
	☐ Yes ☐ No ☐ I don't know.	NB C
	Les C 140 C 1 don t know.	NV C
	Homeson hashad did	NH C
1.	How much school did your mother complete?	NJ C
	(FILL IN THE ONE OVAL which best shows how much school your	NM C
	mother completed.)	NY C
	Did not complete the 8th grade	, NC C
	Completed the 8th grade, but did not go to high school	ND
	Went to high school, but did not graduate from high school	OH C
	Graduated from high school	ОК С
	Some education after graduation from high school	OR \bigcirc
	•	PA C
	☐ I don't know.	RI C
		sc o
8.	Did your mother graduate from a college or university?	SD
		TN
	Yes No 'I don't know.	TX
	r	UT C
9.	Where did you live on your ninth birthday?	VTO
	In the United States (Please specify the state or territory.)	VA
	the state of tellitory.	WAC
	•	wv =
		wi C
	Outside the United States (Please specify the country.)	WY
	— observed offices triease specify the country.)	
		DC C
		OT C
	I don't know.	BL C
	room t know.	000
		BL C

Contents and Order of an Unopened PSU



ATTACHMENT 9

OMMITTED DUE TO CONFIDENTIALITY

ID = Col. 9-12 EXERCISES = Cols. 17-50 AGE = Col. 4 PROBLEM ACHERNT 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 30